

# Compact Wireless BioMetric Monitoring and Real Time Processing System, Phase I

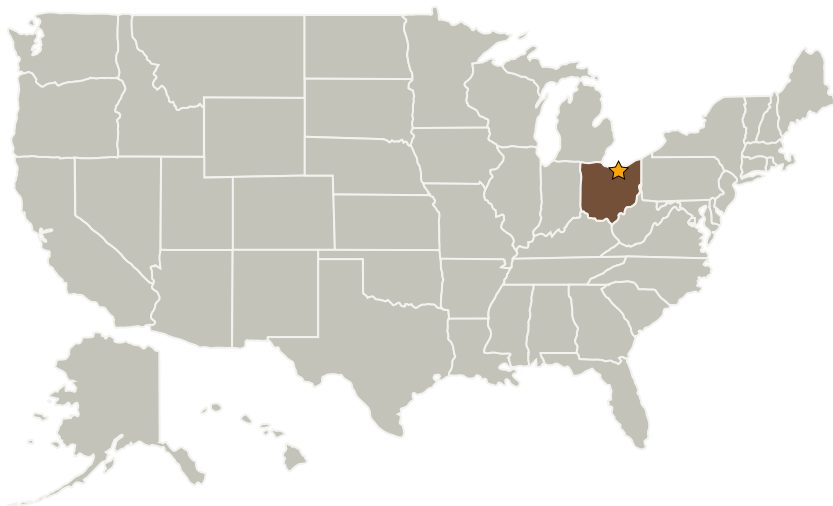
Completed Technology Project (2005 - 2005)



## Project Introduction

ZIN Technologies in collaboration with the Cleveland Clinic Foundation will use their combined experience and research and development expertise to develop a new compact ambulatory biometric data system for space and commercial terrestrial use. This design will improve on the existing design onboard the International Space Station and other available systems by increasing the system resolution from 12 to 24 bits, reducing the weight by 40%, decreasing the overall volume by 70%, increasing usability, extending the dynamic range of biological signals that can be recorded, increasing on-board memory capacity, and providing additional instantaneous feedback to users through an extended local processing capability. Data will be acquired through a cell phone sized unit possibly attached to a subjects belt loop. Data is transmitted wirelessly to a PDA (Personal Digital Assistant) where it can be accessed and viewed by the subject. Data will also be wirelessly transmitted to a processing unit for real-time transmission to ground. When out of range of the processing unit, data will be stored onboard the monitoring device for later transmission. The design will allow for real time data streaming to ground stations and easy accessible viewing of metrics by astronauts on-orbit (or medical subjects terrestrially).

## Primary U.S. Work Locations and Key Partners



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## Organizational Responsibility

### Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

### Lead Center / Facility:

Glenn Research Center (GRC)

### Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

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Organizations Performing Work	Role	Type	Location
★ Glenn Research Center(GRC)	Lead Organization	NASA Center	Cleveland, Ohio
ZIN Technologies Inc.	Supporting Organization	Industry Small Disadvantaged Business (SDB)	Middleburg Hts, Ohio

## Primary U.S. Work Locations

Ohio

## Project Management

**Program Director:**

Jason L Kessler

**Program Manager:**

Carlos Torrez

**Principal Investigator:**

Robbie Bruewer

## Technology Areas

**Primary:**

- TX06 Human Health, Life Support, and Habitation Systems
  - └ TX06.3 Human Health and Performance
    - └ TX06.3.3 Behavioral Health and Performance